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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/554,456	02/05/2007	Wilfried Erb	12944/003	9107
27879 7590 11/17/2009 INDIANAPOLIS OFFICE: 27879 BRINKS HOFER GILSON & LIONE CAPITAL CENTER, SUITE 1100 201 NORTH ILLINOIS STREET INDIANAPOLIS, IN 46204-4220				
EXAMINER				
TORRES VELAZQUEZ, NORCA LIZ				
ART UNIT		PAPER NUMBER		
1794				
MAIL DATE		DELIVERY MODE		
11/17/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/554,456

Applicant(s)

ERB ET AL.

Examiner

Norca L. Torres-Velazquez

Art Unit

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 August 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 39-72 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 39-72 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SG/US)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. The amendment filed on August 7, 2009 have been entered and considered.
2. Claims 39-72 are pending.
3. Claims 46 and 65 have been amended. Claim 46 has been amended to correct the spelling of the work - - glass - -. Independent claim 65 have been amended to further limit the range describing the length of the thermoplast and reinforcing fibers. No new matter was found.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. Claim 65 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
6. Claim 65 recites the limitation "the first fibre" in lines 5 and 8. There is insufficient antecedent basis for this limitation in the claim.
7. Claim 65 is also rendered indefinite because lines 10-11 of it are redundant. Is the fiber content of the composite different or same to that of the nonwoven mat that it comprises?

Claim Rejections - 35 USC § 103

8. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

9. Claims 39-72 are rejected under 35 U.S.C. 103(a) as being unpatentable over CHENOWETH et al. (US 4,946,738) in view of YOKOO et al. (US 2003/0104191A1) as previously stated.

CHENOWETH et al. discloses a nonwoven fibrous product that has good strength and insulating characteristics. (Abstract) The nonwoven fibrous product comprises a blend of glass fibers and synthetic fibers. The glass fibers comprise 42% by weight of the final product. The synthetic fibers may be selected from polyesters, nylons, rayons, acrylics, vinyls, aramids and similar materials. The reference teaches that the optimum portion of synthetic fibers is approximately 38% by weight. The reference further teaches using about 4% by weight of the final product of bicomponent fibers. (Refer to Col. 3, lines 1-25; col. 4, lines 51-58; Col. 5, lines 21-22) The reference further teaches that if desired, a foraminous film or skin may be applied to one or both surfaces of the product. The density of the product may be in the range of from 1 to 50 pounds per cubic foot. $[16-800 \text{ kg/m}^3]$ (Refer to Col. 3, lines 40-44) The length of the glass fibers and the synthetic fibers is approximately one quarter to one-half inch to four inches. $[6-101 \text{ mm}]$ (col. 4, lines 62-66) The reference teaches that the glass fibers, the homogeneous synthetic fibers and the bi-component fibers are blended to produce a highly homogeneous mixture of the three fibers. The reference teaches that the blanket will have a uniform, initial thickness of between about 1 and 3 inches $[25-75 \text{ mm}]$, but that a thinner or thicker blanket may be produced if desired. (Col. 5, lines 60-67)

The Examiner equates the glass fibers to the claimed reinforcing fibers, the synthetic fibers to the claimed first fiber and the bicomponent fibers to the claimed binder.

However, CHENOWETH is silent to the basis weight of the nonwoven material.

YOKOO et al. relates to a long-fiber reinforced thermoplastic resin sheet. [0001] The material disclosed by the reference includes the use of glass reinforcing fibers [0016] with average length of from 10 to 150 mm [0023] and the sheet having a basis weight of from 30-500 gsm. [0008]

Since both references are directed to glass reinforced sheets, the purpose disclosed by YOKOO et al. would have been recognized in the pertinent art of CHENOWETH et al.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to produce the sheet of CHENOWETH with a basis weight within the range taught by YOKOO et al. with the motivation of producing a material that is not too heavy that will not result in higher costs as disclosed by YOKOO et al. (Refer to [0038])

10. Claim 45 is rejected under 35 U.S.C. 103(a) as being unpatentable over CHENOWETH et al. and YOKOO et al. as applied to claim 39 above, and further in view of HISCOCK (WO 87/04476).

With regards to claim 45, CHENOWETH et al. discloses the claimed invention except that it teaches polyester and nylon fibers instead of the thermoplastic materials claimed, HISCOCK shows these thermoplastic materials are equivalent structures known in the art. Therefore, because these thermoplastic materials were art-recognized equivalents at the time the invention was made, one of ordinary skill in the art would have found it obvious to substitute nylon or polyester fibers for polysulfides or polyphenylene sulfide, for example. (Refer to page 6, lines 10-19 that describes thermoplastic fusible polymeric materials).

Response to Arguments

11. Applicant's arguments filed August 07, 2009 have been fully considered but they are not persuasive.

a. Applicants noted that independent claims 39, 58 and 65 each recite "the fiber length of the first fibre being smaller than that of the reinforcing fibre." And argue that the prior art of CHENOWETH is silent to any requirement of the relative length of the first fibers in relation to the second fibers.

It is noted herein that the fiber lengths taught by the prior art of record encompass those ranges claimed in the present application. With regards to the relative length of the first fibers in relation to the second fibers, while the reference does not explicitly disclose that reinforcing fibers are longer than the first fibers, the reference teaches that larger diameter and/or longer synthetic fibers typically provide more loft to the product whereas smaller diameter and/or shorter fibers produce a denser product. (Refer to Col. 3, lines 14-20 and Col. 5, lines 1-10) A reference may be understood by the artisan as suggesting a solution to a problem that the reference does not discuss. See KSR, 137 S. Ct. at 1742, 82 USPQ2d at 1397 "Common sense teaches... that familiar items may have obvious uses beyond their primary purposes, and in any cases a person of ordinary skill will be able to fit the teachings of multiple patents together like pieces of a puzzle. ... A person of ordinary skill is also a person of ordinary creativity, not an automaton."). In this particular case the length range described by the reference for longer fibers is between one to four inches. (Refer to Col. 5, lines 4-6) Thus, it is the Examiner's position that the prior art of CHENOWETH encompasses the claimed limitation of having the first fibers smaller than the reinforcing fibers.

b. With regards to arguments indicating that the final product of the CHENOWETH reference is a thermosetting mat rather than a thermoplastic mat, it is noted that the present invention is claiming a non-woven mat, not a thermoplastic mat as argued. Further, the binder fibers described in the Specification and claimed in the present invention include for example, polyacrylate, and include forms of filaments, fibrils and fibrous binders. It is the Examiner's position that the bicomponent fibers described by the prior art of CHENOWETH read on the claimed binder.

c. With regards to having a thermosetting resin in the mat of CHENOWETH, it is noted that the open-ended language ["comprising"], of the claims in the present application does not preclude the inclusion of a thermosetting resin as argued.

d. With regards to the combination of CHENOWETH and YOKOO, it is noted that both references are related to reinforced sheets used in similar applications (i.e. insulating materials). Thus, while CHENOWETH is silent to the basis weight of the nonwoven product, YOKOO provides motivation for the production of a nonwoven product with the claimed basis weight for use in similar applications.

Therefore, the rejection of claims 39-72 are maintained herein.

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Norca L. Torres-Velazquez whose telephone number is 571-272-1484. The examiner can normally be reached on Monday-Thursday 8:00-5:00 pm and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Larry Tarazano can be reached on 571-272-1515. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Norca L. Torres-Velazquez/
Primary Examiner, Art Unit 1794

November 9, 2009